



**Department of Energy**

Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221

**December 23, 2004**

Ms. Elizabeth Cotsworth, Director  
Office of Radiation and Indoor Air  
U. S. Environmental Protection Agency  
Ariel Rios Building, 6601J  
1200 Pennsylvania Ave., N.W.  
Washington, DC 20460

**Subject: Partial Response to Environmental Protection Agency (EPA)  
September 2, 2004, Letter on Compliance Recertification Application**

Dear Ms. Cotsworth:

In response to the EPA's letter of September 2, 2004, the U.S. Department of Energy (DOE) is providing information that answers some of the questions included in the enclosure to that letter. DOE determined, after review of the EPA September 2, 2004, letter, that the responses to several of the items, including those that address the technical areas of concern, required additional analysis or significant effort.

DOE is investigating the technical areas of concern addressed in EPA's letter and is providing responses to some of these issues and questions in this submittal. In addition DOE has identified an error made in two previous responses to questions C-23-1 and C-23-10. Revised responses are being provided at this time for these two questions

This submittal includes two enclosures. Enclosure 1 is a hard copy of the responses. Enclosure 2 (on compact disc) provides the references for documents identified in Enclosure 1 and other references requested. An electronic copy of Enclosure 1 is also included in Enclosure 2. The enclosed table is a summary of EPA comments received, and the status of DOE responses. Please note that the G-14 response was included in the 10/20/04 Detwiler to Forinash letter that transmitted the MgO emplacement plan.

Also included in this submittal is information requested by EPA regarding the Delaware Basin drilling rate and its affect on releases (see Enclosure 1).

If you have any questions, please contact Russ Patterson of my staff at 505-234-7457.

Sincerely,

Lloyd L. Piper  
Acting Manager

Enclosures

Ms. Elizabeth Cotsworth

-2-

December 23, 2004

cc: w/enclosure

B. Forinash, EPA \*ED

C. Byrum, EPA ED

T. Peake, EPA ED

R. Lee, EPA ED

J. Schramke, Contract ED

cc: w/o enclosure

G. Basabilvazo, DOE ED

P. Shoemaker, SNL ED

N. Elkins, LANL ED

CBFO M&RC

\*ED denotes electronic distribution

Comments Received Sept 2, 2004	Included in this Submittal	Previously Submitted	Pending
G-10 Ground water basin modeling and ground water chemistry	✓		
G-11 Inclusion of omitted areas in mining transmissivity calculation			✓
G-12 Potential effects of heterogenous waste loading on chemical conditions	✓		
G-13 Ligands potentially produced as aqueous metabolites	✓		
G-14 Methanogenesis		•	
C-14-1 Figure 2-37 revision			✓
C-14-2 Background conditions since CCA		✓	
C-14-3 Post-CCA seismic events		✓	
C-15-1 Compacted waste in or planned for inventory		✓	
C-23-11 95 percent confidence interval			✓
C-23-12 Documentation for chemical benefit of MgO emplacement	✓		
C-23-13 Organic ligand complexation on (V) and ( oxidation state actinides	✓		
C-23-14 Identification of relevant non-WIPP actinide solubility data	✓		
C-23-15 Organic ligand sensitivity			✓
C-23-16 Actinide solubility uncertainty			✓
C-23-17 Metallorganic ligand competition for actinides and solution ionic strength	✓		
C-23-18 Sensitivity of top ten releases			✓
C-23-19 Identification and justification for changes to all parameters			✓
C-23-20 Exclusion of parameter correlations		✓	
C-24-5 Inclusion of information on complexing agents, nitrates and phosphates	✓		
C-24-6 Importance and nature of waste stream profile inconsistencies		✓	
C-24-7 Impact of waste loading within TDOP containers	✓		
C-31-1 ORIGEN 2.2 decay model		✓	
C-32-1 Nuclear criticality possibility with non-random waste loading		✓	
C-42-5 Status of all monitoring programs		✓	
C-42-6 Location where Appendix DATA Attachment C tables are analyzed		✓	
C-53-1 Reference to support NUTS code tracer exercise	✓		
R-23-1 Reference		✓	
R-23-2 Reference		✓	
R-23-3 Reference		✓	
R-23-4 (Section 6.4.3.5) Reference		✓	
R-7-1 (Section 7.3.2) Reference		✓	
R-7-2 (Section 7.3.2) Reference		✓	
R-7-3 (Section 7.3.2) Reference		✓	
R-7-4 (Section 7.3.2) Reference		✓	
R-24-2 (Section 4.1.3.3, Appendix DATA Annex F) Reference		✓	
R-MON-1 (Appendix MON) Reference		✓	

\* G-14 response was included in the 10/20/04 Detwiler to Forinash letter that transmitted the MgO emplacement plan.  
CBFO:AMO:RP:GS:04-1762:UFC 5486.00